Role of Education in Canadian Human Development

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CHAPTER 1:
INTRODUCTION

1.0 Overview

Dating back to the late 1900s, Human Capital as a concept has seen a dynamic and drastic transformation in its meaning and approaches. Seeing its change across the wide spectrum of public policies one can clearly note that human capital is one of the most crucial factors affecting economic issues at all levels of society.

Back in 1961, it referred to the value of life lost due to wars and death (William Betty). With time, other economists suggested the use of Human Capital as a measure of earnings to determine compensation. Influence of mortality statistics and the concepts of human capital helped to develop approaches for insurance policies.

Adam Smith referred to human capital as the wealth, training, knowledge, talents, and experiences for a nation. He suggested that improving human capital through training and education leads to a more profitable enterprise, eventually adding to the collective wealth of society.

The modern definition, however was explored much recently by Harvard economist Richard Freeman, who considers human capital to be a signal of ability and talent. The business-oriented approach calls for effective investment of the institution's resources in training and developing the human capital employed in order to increase productivity. Such varied approaches to the concept of Human Capital have led to numerous definitions, a few of them as below,

"Human Capital is the knowledge and skills which individuals create, maintain, and use."
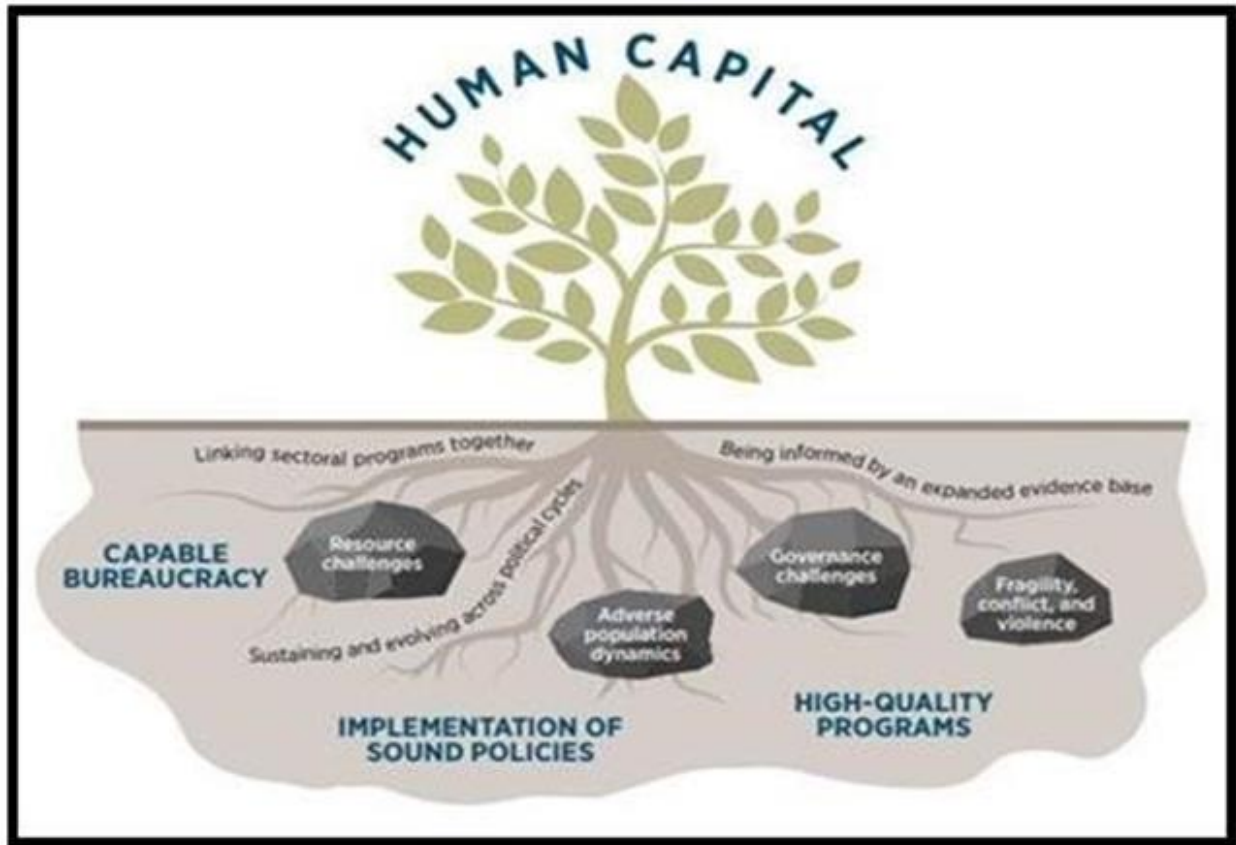
- M Armstrong

Figure 1: Nurturing Human Capital (Source: World Bank)

OECD states human capital as 'the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances.'

All of these definitions clearly depict that human capital is one of the most important resources for any economy's growth. Also, it is worth noting that human capital is not just a uni-dimensional concept, but is quite multi-faceted and diverse with respect to every economy.

With the confluence of rapid changes like globalization and liberalization across the world, economies have now started to realize the importance of skill-based learning and the reasons to priorities human capital development as a strategy to economic growth and competitiveness.

1.0   Definition - Human Capital Development

For a more clearer and definitive approach to the research the team deliberated and worded a comprehensive and multi-dimensional definition to the important terms used across the research.

"**Human Capital** is the collection of skills, knowledge, competencies, social attributes and personality traits embodied in an individual, with reference to his EQ, leading to societal development and eventually, economic prosperity*.*"

"**Human Capital Development** is the process of creating a productive environment for the enhancement of Human Capital, resulting in the achievement of individual, social and economic commitments, towards the economy, in a tangible manner."
With reference to,

(a) Competency: Competence talks about the efficiency or ability of an individual to perform a given task. It further branches into behavioral competence (soft skills) and functional competence (technical skill).
(b) Attributes: Characteristics or the merits of a person.
(c) Skills: The loaned ability that one possesses to carry out pre-determined results, often with the minimum outlay of time, energy or both.
(d) Knowledge: It is a clear or certain mental apprehension involving creation, utilization and dissemination of specific information as and when required.
(e) Economic Prosperity: It talks about transforming the investment in human capital and their needs into effective measures leading towards economic development at all levels.

1.1 Importance of Human Capital Development

Human Capital does not exist in a vacuum. It is a source of both increased productivity and technological advancement. The difference between the developed and developing countries is the rate of progress in human capital. The process of change from a conventional or traditional to a modern society requires proper development of human capital. In order to remove economic backwardness of the underdeveloped countries as well as to instill the capacities and motivation to progress, it is quite necessary to increase the level of knowledge and skills of the people. Thus, in the absence of proper methods and reforms to improve the quality of human factor, underdeveloped countries shall not be able to attain the desired rate of progress.

1.2　Human Capital Index (HCI) as a measure of HCD

Considering the importance and relevance of strategizing schemes for appropriate human capital development, the World Bank introduced the Human Capital Index in the year 2018, which measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared to a benchmark of complete education and full health. It is constructed annually for around 157 countries. It is made up of 5 indicators:

(a)　Probability of survival up to age five,

(b)　Expected years of schooling,

(c)　Harmonized test scores to determine quality of learning,

(d)　Adult survival rate, and

(e)　Proportion of children who are not stunted.

These 5 indicators together comprise the HCI which currently stands as a universal measure for the status of Human Capital Development in economies around the world.
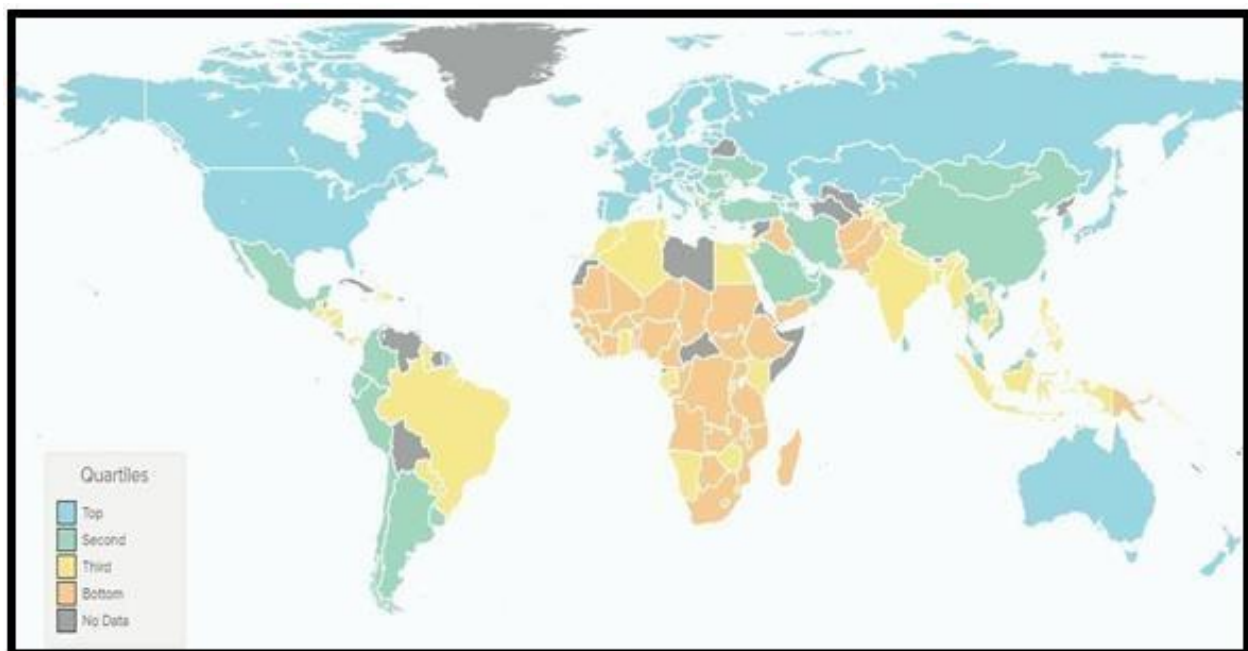

Figure 2: A choropleth map depicting HCI rankings of 157 economies (Source: World Bank)

1.3.1　Human Capital Development in Canada

Canada is a developed economy that pays major attention to the development of its human capital and aims towards polishing their skills through a variety of methods, thereby ensuring an efficient and educated work force in the future. Many recent empirical studies have shown that public expenditure in Canada on skills formation and increasing knowledge competencies has taken priority over other economic issues. The economy's vast bounty of natural resources coupled with a rational and well-trained human factor provides for a decent standard of living and maximum participation of society.

The socio-economic factors of the country clearly indicate a strong base for the economy's progress in the direction of increased production, better opportunities and social mobility.

Policies of Canada have been focused on bridging the gaps between educational attainments and skill sets among the key subsets of their human capital for efficiency and equity reasons.

The effects of such reforms are clearly evident in the high global ranking of Canada in Human Capital Index, where it leads the OECD group of countries, standing at a glorified Rank 10 out of 157 economies covered under the study.

The table below depicts its overall index values.

Most Recent Estimate Indicator	Male + Only	Male	Female Female	Only
HCI Component 1: Survival				
Probability of Survival to Age 5	0.995	0.994	0.995	
HCI Component 2: School				
Expected Years of School	13.7	13.7	13.7	
Harmonized Test Scores	537	535	539	
HCI Component 3: Health				
Survival Rate from Age 15-60		0.941	0.929	0.953
Fraction of Children Under 5 Not Stunted				
Human Capital Index (HCI)	**0.80**	**0.79**	**0.81**	
Uncertainty Interval	[0.79,0.81]	[0.78,0.80]	[0.80,0.82]	

Table 1: HCI Standing of Canada (Source: World Bank)

1.3.2 *Human Capital Development in India*

India, an underdeveloped economy, can be considered to have a blessing when it comes to human resources. India boasts about having a huge human capital base (second-largest in the world). Despite this, the rate of development of such capital is very low in our economy because of stifling strain on our resources which are employed in other sectors. This is caused mainly due to the low investment in training of our population and the strenuous acceptance of new ideas in the social fabric of our country. The standard of living, though growing day-by-day, still remains lower to other developing economies worldwide and focus on skill improvement through education seems to be a far-fetched idea. Though standards of education are pretty high, the system of learning in India is subject to a lack of practicality and severe brain drain when it comes to employability of skilled labor. Unemployment plagues the current market scenario of our economy, clearly reflecting on the low human capital development. The government has been taking sincere efforts in the past few years to rectify this situation by issuing multiple grants to promote quality education and utilize modern methods to develop skills amongst individuals at a young age.

India stands at Rank 115 out of 157 economies in the Human Capital Index, the details of which are provided below. *(Based on World Bank Report on Human Capital Development)*

Indicator	Most Recent Estimate		
	Male + Female	Male Only	Female Only
HCI Component 1: Survival			
Probability of Survival to Age 5	0.961	0.961	0.960
HCI Component 2: School			
Expected Years of School	10.2	10.1	10.3
Harmonized Test Scores	355	347	362
HCI Component 3: Health			
Survival Rate from Age 15-60	0.825	0.790	0.864
Fraction of Children Under 5 Not Stunted	0.621	0.617	0.626
Human Capital Index (HCI)	**0.44**	**0.43**	**0.45**
Uncertainty Interval	[0.43,0.45]	[0.42,0.44]	[0.44,0.46]

Table 2: HCI Standing of India (Source: World Bank)

1.3 *Education and HCD*

Human Capital is said to be most productive and capable to provide modern competitive advantages, when it is driven towards innovation, hi-technology and creative activities. Orientation of human capital towards intellect, skills and training is a significant component in its process of development. This is where education plays a major role. The educational potential of human capital is believed to be extremely important, since education serves as a base for knowledge, abilities and skills, develops professional capabilities and consequently generates conditions for economic growth.
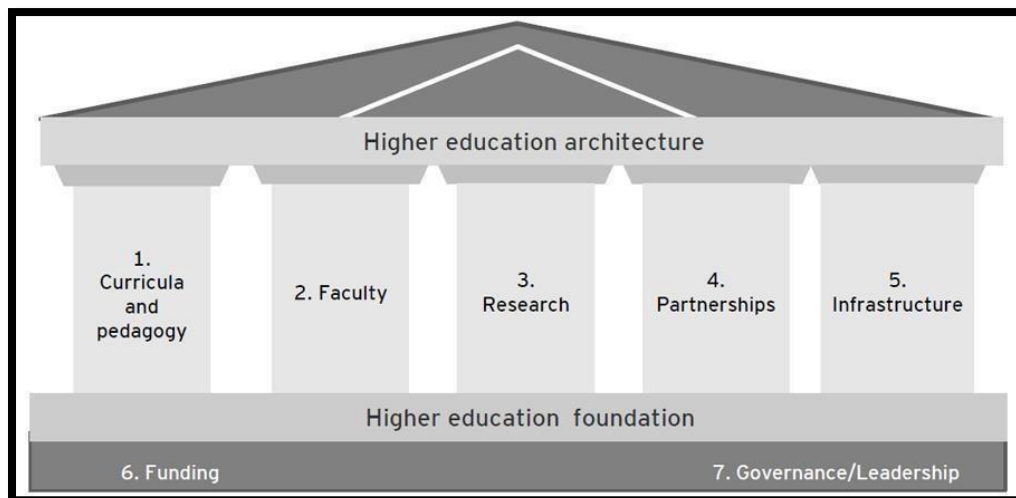

Figure 3: Basic Structure of Higher Education (Source: World Bank)

Education is one of the cornerstones of the welfare society. In this context, it is necessary to note and record the influence of formal, ongoing and applied education on the human capital of an economy. The effects of the educational structures are clearly visible in the overall development of the human capital. Education is the comprehensive output of learning through varied sources including vocational and

technical superiority. The parameters such as study for an academic degree, self- improvement and advanced training are often considered as the standard of gauging educational status. However, it is important to observe the effects of practical experience as well.

1.4 Improving Human Capital through Better Education:

One of the key factors behind low quality of human capital is lack of focus on education system and clear strategies to develop the education system. Integration of Human Capital Development plan with economic master plan is needed for the development of Human Capital. Better educational facilities tend to develop human capital to its full potential.

1.5 Relationship between Capital Development and Economic Growth:

Human capital Development and Economic Growth have a strong correlation. Human capital affects economic growth and can help to develop an economy by expanding skills and knowledge of its people. Human Capital Development provides economic value since a knowledgeable workforce can lead to increased productivity. Also, the quality of work can be improved by investing in people's education. Human Capital Development is positively correlated to economic growth since investment tends to boost productivity. The process of educating a workforce is a type of investment and that investment is in human capital.

1.6 Investing in People to Build Human Capital:

Scientific and Technological advances are transforming lives; but still many countries face tremendous challenges as far as Human Capital Development is concerned. In fact, more than 260 million children and youth all over the world are receiving no education at all. Human Capital- 'the potential of individuals' is going to be the most important long-term investment any nation can make for its people's quality of life and future prosperity. Countries need to gear up to prepare their human capital for major challenges and opportunities that are being driven by technological changes. A focus on human capital is essential for all nations at all income levels, since the frontier for skills is continuously moving and the demand for better education and health is increasing everywhere.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

Education as a component of human capital development has been an important subject matter in the academic circle. A great deal of research work has been done on the role of education in developing and enhancing the productivity of human capital. Following is a brief of such research papers reviewed by the team.

2.0   *Papers Reviewed*

The Research Paper Published by Conference Board of Canadian "Gender Equity, Diversity and Inclusion"- Jessica Edge, Eleni Kachulis and Matthew Mckean (2017): The research paper reports insights of the meeting held on February 2017, wherein gender equity, diversity and its inclusion in Post-Secondary Education (PSE) were discussed. It emphasizes on the advisable practices and shared steps that PSE institutions and other organizations can take to aid their students reach their full potential. Shift in culture will help in forming and sustaining inclusive campuses whereby multiple perspectives and familiarities can be sought out. The author believes that these contributions will add significant value to the educational enterprise. Transparency, identification of issues as well as tracking of progress can be achieved by reporting diversity data on faculty, staff and students at universities.

"Higher Education in India: Challenges and Opportunities" -Younis Sheikh (2017): Higher education system in India is the world's third largest in terms of students. Owing to the involvement of the private sector, India's Higher Education sector has witnessed a stupendous upturn in the number of Universities/University level Institutions & Colleges. The private sector stimulates almost 60% of higher education institutions in India. Over the last decade, multiple institutes have been accelerated; making India home to the largest number of Higher Education institutions in the world, with student enrolments at the second highest. Despite these, India continues to face stern challenges. Still, 25 percent of its population is illiterate; and just 7 per cent graduate. To knock off these challenges, there are lots of opportunities available. If these opportunities are clutched at the correct time, India has the competence to make its identity at an international level.

"Present Scenario of Higher Education in India" by Dr. Kirti Matliwala (2016): It intended to recognize concerns and challenges in the field of higher education in India. Appropriate education is a very important factor for the development of a country. Some of the issues discussed in this paper were brain drain, lack of large number of high-quality educational institutions and low foreign investment in education in India. To cater to such complications existing in the system of Indian education, an effective solution includes strengthening research and development, allocating more budget for development of quality educational institutions and creating awareness about the importance of education.

"Canada 150 and Beyond": "The Role Of Human Resources In Canada's Prosperity" - Published By CPHR Canada (Chartered Professional In Human Resources, 2016): CPHR Canada commissioned a research study to outline Canadian Human Resources and their efficiency and productivity. The study is grounded on publicly available information published by Statistics Canada, The Organization for Economic Co-operation and Development (OECD) and The World Economic Forum (WEF). In 2011, the employment rate in Canada for the population aged 25 to 64 years was 75.3%. Within this group, 30.8% held university

credentials while 12.7% held no certificate, diploma or degree. The employment rate for those having university credentials held at 81.6% compared to 55.8% for those having no certificate, diploma or degree. The paper believes that prosperity and global competitiveness of any economy can be sought by educating and training the country's human

resources. The quality of human resources determines how well the country's economy will do. So, it is utmost important to enrich the quality of human resources which can be done by grabbing ample opportunities available.

"Human Capital and Economic Growth in India: A Co-integration and Causality Analysis" published in 2015 by Preeti Sharma: This paper studies the relationship between the human capital investment in education & health and economic growth of the Indian economy using various tools. The Granger Causality Test confirms the presence of two-way causality between education/health investment and GDP. This proves that investment in education and health is very important and has a significant positive long-term effect on the per capita GNP growth. This paper indicates that the components of human capital - education and health, are key variables that affect economic growth in India, or any economy for that matter, and economic growth, in turn provides a platform for the growth of human capital.

"The Impact of Human Capital Development on the Economic and Social Development of a country" by Jeļena Lonska and Iveta Mietule (2015): The paper aims to verify the existence of a bidirectional link: one runs from human capital development to economic growth whereby human capital helps increase national income and societal development; whereas the other runs from economic growth to human capital development wherein the resources from national income are allocated to activities contributing to human capital development. A correlation analysis carried out by the team demonstrated a strong link between the human capital development and the country's economic (r =+0.944, p = 0.000) as well as national development (r = +0.882, p = 0.000). This means that highly developed human capital and a country's national economic performance have a symbiotic relationship, both proving to be advantageous for the other.

"Overview of Higher Education in Canada" a research paper by Glen A Jones (2014): It emphases on structure of higher education in Canada. Under Canadian system of education, accountability for higher education has been allocated to diverse provinces under Canada's constitutional federation. Albeit, it is highly decentralized, still federal government has a role to play by accompanying university research and student funding. Canada is the country which has highly accessible public system as it brags highest participation rates in the world and has one of the most educated populations. This paper has scrutinized the pros and cons of decentralized education and studied present developments and issues.

"Advancing Teacher Education through Faculty Development" by Darlene Ciuffetelli Parker and Julian Kitchen (2009): The paper highlights that teacher education is a specialized field of scholarship and practice in which there is both a core body of knowledge, ongoing research and innovative practice. Attempts need to be made to prioritize the professional development of teacher educators as it is crucial for enhancing the profile of teacher preparation programs. Effective teacher education programs involve an initial preparation, ongoing professional development, practitioner research, and dissemination of teacher educator reforms. This helps harness the true potential of teachers, thus solving the problem of under-skilled teachers and ultimately poorly educated students.

CHAPTER 3:
RESEARCH METHODOLOGY

3.0 Introduction

The paper aims at understanding the undergraduate education structure of both India and Canada and what strengths they possess in their respective education system. The paper focuses on the impact of education and various other factors on Human Capital Development with reference to undergraduate students. Attempt has also been made, to understand the reasons for major differences seen in the two undergraduate education structures of both Canada and India and to draw lessons from Canada for betterment in India.

3.1 Research Objective

(a) To study undergraduate education structure of both Canada and India.
(b) To demarcate the significant similarities and differences between the Indian and Canadian education system.
(c) To identify the viewpoints of students, teachers and placement officials in respect to undergraduate education system in both India and Canada.
(d) To examine the inclusiveness of the Indian system of education.
(e) To formulate policies and reforms that should be adopted by India for advancement in its higher education system.

3.2 Research Design

The design used for research is mixed method. Both primary and secondary data have been used for the purpose of research. While significant information was extracted from published journals, magazines, internet search engines and other government websites, three structured questionnaires for students, teachers and placement agencies respectively were drafted by the team to gather realistic information pertaining to the undergraduate higher education structure of both economies. While collecting primary data, consideration has been given to the financials capitals of India and Canada viz. Mumbai and Toronto respectively. Responses were collected and assessed with reference to secondary data collected during the research in order to reach valid conclusions and inferences. Thus, a proper balance was maintained between both the data sources.

3.3 Data Sources

Structured questionnaires were used to obtain responses from students, teachers and placement agencies of both Canadian and Indian undergraduate education system. The questions included in the questionnaires were both open-ended and close-ended to understand the undergraduate education system of both countries in a diligent manner. Several sources were tapped including contacting Universities through Education Fairs.

3.3.1   Primary Sources

Respondents	Technique	Description	No. of Respondents
Indian Students Canadian Students	Questionnaire	Responses were collected from students who are currently pursuing Undergraduate Education.	258
			63
Indian Teachers Canadian Teachers	Questionnaire and Interviews	Responses were collected from teachers who are currently teaching at Undergraduate Level	54
			29
Placement Agencies	Questionnaire	Responses were collected from Agencies who provide required student data to Companies that have Vacancies	09

Table 3: Details of Data Collected from Primary Source

3.3.2   Secondary Data
(a) Published Reports from International Institutions
(b) Published Research Journals and Magazines
(c) Reports of high ranking executes

3.4   Data Cleaning/Refining for Analysis

Once these responses were collected, they were checked for completeness of response and only these responses were utilized for the analysis. This raw data was then compiled and refined to be used - appropriately in the analysis.

3.5   Limitations of Study

Given the size of population and expanse of both the countries, the sample size is very limited. However, efforts have been taken to consider a representative sample. The extent of our data collection was restricted to the financial capitals of both the countries i.e. Mumbai and Toronto. Further, various industry representations could have been considered. The study focuses on some of the core problems in the Indian Education System.

3.6   Further Scope for Research

(a) Study focusing exclusively on the problems of Disabled students can be conducted.
(b) Impact of Quality of Primary education on Quality of Undergraduate Education.
(c) Implications of Various other problems on the performance of the Education System.

CHAPTER 4:
KEY ASPECTS OF EDUCATION SYSTEM IN INDIA AND CANADA

4.0 Introduction

According to Britannica, the term 'education' refers to the "methods of teaching and learning in schools or school-like environments as opposed to various non formal and informal means of socialization (e.g., rural development projects and education through parent-child relationships)... Education can be thought of as the transmission of the values and accumulated knowledge of a society." Education is imparted through an organised structure called an education system. An 'education system' is a formal institutional arrangement which forms the foundation for the growth of students in a particular region, such as a nation, state, or a district. Education is pivotal in the formation and development of human capital. And, human capital is necessary to ensure sustainable economic growth. Hence, a number of countries across the world are prioritising education and diverting their resources towards developing sophisticated and holistic education systems.

4.1.   Outlook

The chapter is designed to provide a comparative analysis of two unequivocal economies and educational systems by providing a common base of factors on which the analysis stands validated while including substantial information about the policy profile and development of individual countries. The following description has been laid out for each country and its educational system:

(a) Analysis of Individual Nation's Educational Context
(b) Highlights of Overall Profile of Education
(c) Challenges Faced on Multiple Levels
(d) Policy Responses & Reforms

4.2   Tableau of Canadian Educational System

4.2.1   Canada's Educational Context

Education is laid out to be the responsibility of a province/territory under the Canadian governance system. Simultaneously, Canada has adopted policies and schemes that indicate that the country has realized the significance of education. Everything that has made Canada unique, especially with regard to topography, political administration, economic conditions, language and culture has played a direct role in the evolution of higher education in Canada. The Canadian government has shown its commitment towards ensuring accessibility, affordability, relevance, and quality in the education system. It has created a state-funded, subsidized educational network which has ensured that education is a right instead of a privilege, a mission instead of a secondary goal.

The Human capital development is a prerequisite for Canada to realize its potential and to ensure sustainable, long-term prosperity for all Canadians. The economic stability of a country depends on the quality of human resources rather than the abundance of human resources. The two main attributes of high quality human resources are 'Efficiency' and 'Productivity'. Hence, efficiently deployed productive human resources are of vital significance in building the wealth of a nation. And, the wealth of a nation can be

increased through investment in innovation, infrastructure, trade, education, and healthcare. A major determinant of a nation's economic health is education. In general, educated and well-trained workers are more productive than workers who are uneducated. In Canada, the development of value- added industries, such as manufacturing and software development is the direct result of the availability of skilled labour.

Attainment of Post-Secondary Certificate, Diploma or Degree				
	Males		Females	
	Number of persons	Percentage of persons	Number of persons	Percentage of persons
Selected demographic characteristics	2016	2016	2016	2016
	Persons	%	Persons	%
Total, persons aged 25 years and over	7,138,955	48.4	7,608,955	51.6
25 to 34 years	1,455,610	45.9	1,714,800	54.1
35 to 44 years	1,467,115	46.1	1,718,350	53.9
45 to 54 years	1,536,380	47.9	1,670,425	52.1
55 to 64 years	1,362,325	50.4	1,342,005	49.6
65 years and over	1,317,525	53.1	1,163,375	46.9
Non immigrants	5,013,750	48.2	5,392,390	51.8
Immigrants	2,007,745	48.9	2,100,770	51.1

Table 4: Canadian Enrolment Details (Source: Statistics Canada)

Canada spends about 7% of its GDP on education. Further, per student spending average is around 17,879 CAD at the college level. Canada has the highest stock of human capital in the OECD, in terms of educational attainment. Educational attainment is higher among 25-34 year olds with around 50% having acquired a higher level of education in comparison to the OECD average of 28%. A majority of the personnel in the specified age group have university qualifications, while the rest hold college diplomas.

According to the 'Labor Force Survey' conducted in January of 2019 in Canada, the number of people employed has increased by 67,000 and this newly employed workforce consists of youth aged between15-24. Most of the employment has been generated in the service-producing industries. The unemployment rate increased by 0.2% and is currently at 5.8% as more people look for work. The data gathered in 2016 revealed that there are 96 undergraduate universities in Canada into which around 1.8 million students are enrolled. Further, enrolments in Canadian public colleges and universities totaled 20,51,865 in 2016-17, up by 1.2% (+24,186) from the previous academic year. And, enrolments of international students rose by 11%

(+24,315), thereby significantly accounting for the increase in overall enrolments.

4.2.2   Highlights of Canadian Higher Education Structure:

- **Full autonomy to post-secondary educational institutions:** The education system in Canada is decentralized. There does not exist a Ministry of Education at the centre, but a CMEC (Council of Ministers of Education) to coordinate provincial educational policies. Most of Canada's colleges and universities are provincial and public. Hence, most of the funds are supplied by the provincial governments. However, the provincial governments do not directly interfere into the academic activities of post-secondary institutions. They play a supervisory role by monitoring and directing these activities and programs, instead of completely controlling them. Hence, these institutions have a higher degree of autonomy and academic freedom to explore a wider range of courses.

- **Trained teachers with high aptitude for research:** The higher education structure in Canada has ensured that students can communicate with trained teachers who possess a high research aptitude

- **Vocational Education and Apprenticeship System:** This form of education is primarily offered at the post-secondary level in public as well as private technical and vocational institutes, colleges, and universities in Canada.

- **Community Colleges:** Students in Canada can join community colleges after obtaining a high- school diploma to prepare for a vocation, or to prepare for further university education by obtaining transferable credits that can be utilised once they join the bachelor's programme.

- **Low Fees:** The tuition fees of Canadian universities are much lower in comparison to other international foreign universities. This is a major reason for Indian students to prefer Canada as their career destination.

- **Internship Programs:** Internship programs have been conducted by Canadian universities to enhance the work experience and practical knowledge of students.

- **'Work while you study':** Students in Canada have the advantage of being able to work while studying. Among other benefits, this allows them to manage their finances without incurring enormous debt. To gain the right to work off-campus, students must have a valid study permit, be a full-time student, be enrolled in a designated learning institution at the post-secondary level studying in an academic, vocational or professional training program that will result in a degree, diploma or certificate that is at least six months in duration.

- **Focus on Research:** Most study programs delivered by Canadian universities focus a lot on research and students get to engage in intriguing experiments and projects that are designed to provide a complete study experience based on innovation and forward thinking. Further, the research that has been conducted in the universities in Canada has produced fascinating theories, distinguished discoveries, and even some life-changing inventions.

- **Facilities for Differently-Abled Students:** Many post-secondary educational institutions in Canada have a department of access or disability services to provide specialized services to differently abled students for their particular needs. Additionally, 'Disability Awareness Training' is provided to the entire faculty and staff in order to make them aware of what constitutes a disability and to develop solutions aimed at enhancing the academic experience of disabled students. Some post-secondary institutions offer scholarships for disabled students of which some are specific to physical disabilities, whereas other scholarships focus on learning disabilities. Further, academic accommodations such as providing study material in an alternate format, private exam space for students with ADHD, providing note-takers for students with hand or wrist injuries helps disabled students to overcome disability-related challenges that hinder their academic success.

- **Vibrant and lively Campus life:** Apart from education, there are a number of events happening in the university. Every university has its own events which ensure that students participate in cultural activities that help them socialise, converse, and engage with a diverse set of people. Universities provide an array of extracurricular activities for students' all round development. Students belonging to various ethnic groups with different cultural backgrounds, cuisines, mannerisms, and perspectives exist in Canada.
- **Hub of top-ranked universities:** Universities in Canada have a positive reputation in terms of academic performance and graduate employability rate. In fact, many of the Canadian higher educational institutions compete with reputed universities in the U.S. and the UK.

Some of the top-ranked Canadian universities:

1. University of Toronto
2. University of Montreal
3. University of Alberta
4. McGill University

4.2.3 Challenges Faced By Canada's Education Structure:

- **Inaccessibility For Minority & Aboriginal Students:** Though Canada has recorded positive indicators and better performance than OECD averages across parameters of equity & equality, there is a widening gap between accessibility at OECD for minority-language students and aboriginals when compared to Canada.
- **Rough Transition To Higher Education/Labour Markets:** Canadian 16-65 year-olds performed at the average in literacy and below the average in numeracy compared to other participating countries. Compared to their peers in other countries, young adults (16-24 years- old) have below average literacy skills and average numeracy skills. At upper secondary level, a challenge shared by many countries is to provide relevant education that will prepare young adults for work and, at the same time, develop capacity for further learning.
- **Teacher Supply Imbalance:** Certain provinces in Canada face imbalance in demand and supply of trained & qualified faculty. This, however, has been countered by appropriate policy development & implementation.
- **Underdeveloped Apprenticeship System:** The apprenticeship system in Canada is comparatively underdeveloped as compared to OECD nations. 7.8% of men & 1.6% of women hold an apprenticeship certificate. The number of women holding apprenticeship certificates have decreased significantly since the last decade while there is only nominal growth observed in the category of men.

4.2.4 Policy Responses & Reforms

1) The CMEC Early Learning and Development Framework (2014) presents a pan-Canadian vision for early learning, to be adapted to the needs of each province and territory, to support development of policies and initiatives to enhance quality and continuity of the learning experience in the early years and beyond.
2) To strengthen links between education and the labour market, for example, New Brunswick launched the Labour Force and Skills Development Strategy (2013) to strengthen student pathways, support learning and skills development and retain or attract skilled individuals to participate in the New Brunswick labour market. In part, the strategy aims to align kindergarten to Grade 12 and post-secondary education with labour market needs so that students can gain the knowledge and skills needed

for an easier transition into the workforce.

3) Improving and adapting teacher education is a common policy priority for several Canadian jurisdictions. For instance, Prince Edward Island's Professional Learning Report 2013 defined areas of improvement in teachers' learning, and the Ontario government recently announced a modernisation of teacher education in the province.

4) Through intergovernmental agreements, the Government of Canada supports the work of provinces and territories to improve outcomes for official-language minorities by supporting initiatives in areas such as the provision of programmes, student performance, enriching the school environment and support to educational staff. A multilateral multi-year Protocol for Agreements for Minority Language and Second-Language Education with the Council of Ministers of Education, Canada (1983, re-structured in 2013) sets the parameters for this intergovernmental collaboration.

4.3.   Tableau of Indian Educational System

4.3.1   India's Education Context

With a rapidly increasing population, India has the demographic edge: a young talent pool which is estimated to become the world's largest by 2030. India's education system has undoubtedly supplied some of the world's best talent and the boardrooms of multiple Fortune 500 corporations are occupied by individuals who are the products of the Indian education system. Apart from a unique structure that encompasses many different educational structures around the globe, Indian education system continues to place an emphasis on the values of individualism, secularism, rationality and to a lesser extent, cosmopolitanism. Ultimately, its vision of progress continues to mimic Western traditions of knowledge creation and dissemination. Even as India enjoys one of the fastest growing economies in the world, and a major contribution in this feat via knowledge-intensive services, there are concerns regarding the deterioration in the quality of Indian universities and colleges. Higher education in India commences at the undergraduate level. A student is eligible to pursue higher education in India after completion of two years of junior college. The duration of higher education is between 3-5 years, depending on the course chosen. During these years, a student receives streamlined and advanced education in the field of his choice. The knowledge gained is then tested through biannual examinations in order to record the progress of the student. The performance of the students in these tests determines the final grades or marks awarded. Once a student completes the required number of years of training and passes all the assessments, he is eligible to receive a degree from the college at which he was pursuing the course or from the university to which the college is affiliated.

In India, there are 47 Central Universities, 371 state public universities, 305 state private universities, 124 deemed universities, 127 institutions of national importance and around 39,931 undergraduate colleges.

Type of university	Number of Universities
Central University	46
Central Open University	1
Institution of National Importance	127
State Public University	371
Institution Under State Legislature Act	5
State Open University	14
State Private University	304

State Private Open University	1
Deemed University- Government	34
Deemed University- Government Aided	10
Deemed University- Private	80
Grand Total	**993**

Table 5: Classification of Universities in India (Source: AISHE 2018-19)

Only affiliated and constituent institutions of Central and State Public Universities have been counted as colleges. Constituent units of deemed/private universities, Off-campus centers and Recognized centers have not been counted as Colleges. There are 298 affiliating Universities and they have 39931 colleges.

Range Number of Colleges	Number of University
0-100	168
100-200	59
200-300	36
300-400	12
400-500	10
500-1000	13
Grand Total	**298**

Table 6: Classification of Colleges in India (Source: AISHE 2018-19)

College density, i.e. the number of colleges per lakh eligible population (population in the age-group 18-23 years) varies from 7 in Bihar to 53 in Karnataka as compared to All India average of 28.The highest number of students are enrolled in Arts courses. Total enrolment in higher education has been estimated to be 37.4 million with 19.2 million male and 18.2 million female. Female constitute 48.6% of the total enrolment. The total number of students enrolled in Arts courses are 93.49 lakh out of which 46.96 % are male and 53.03% are female. Science is second major stream with 47.13 lakh student out of which 49% are male and 51% are female. Commerce is third major stream with 40.3 lakh students enrolled. The share of male students enrolled in Commerce is 51.2% whereas female enrolment is 48.8%. *(Based on All India Survey on Higher Education 2018-19)*

Vocational courses are courses which provide work oriented training for specific professions. The structure of the Indian undergraduate education system has limited opportunities for those who wish to pursue education in vocational fields. Mostly, vocational courses in India are pursued by students as an added skill with their primary degree. Further, there seems to be a skewness in the available opportunities- Performing Arts and Designing are two vocational fields for which formal education is widely available. Accounting and Auditing constitutes another popular vocational course in India. There are certain recognised courses for skill development such as plumbing, tailoring, repairing and maintenance of automobiles, maintenance of cell phones, masonry, carpentry, welding etc. However, the courses are scarce despite the high demand for technicians.

4.3.2   Highlights of Indian Education System:

- **Improving Enrolment:** Estimated Gross Enrolment Ratio (GER) in Higher education in India is 26.3%, which is calculated for 18-23 years of age group. GER for male population at all India level is 26.3% whereas GER for female population at all India level is 26.4%.
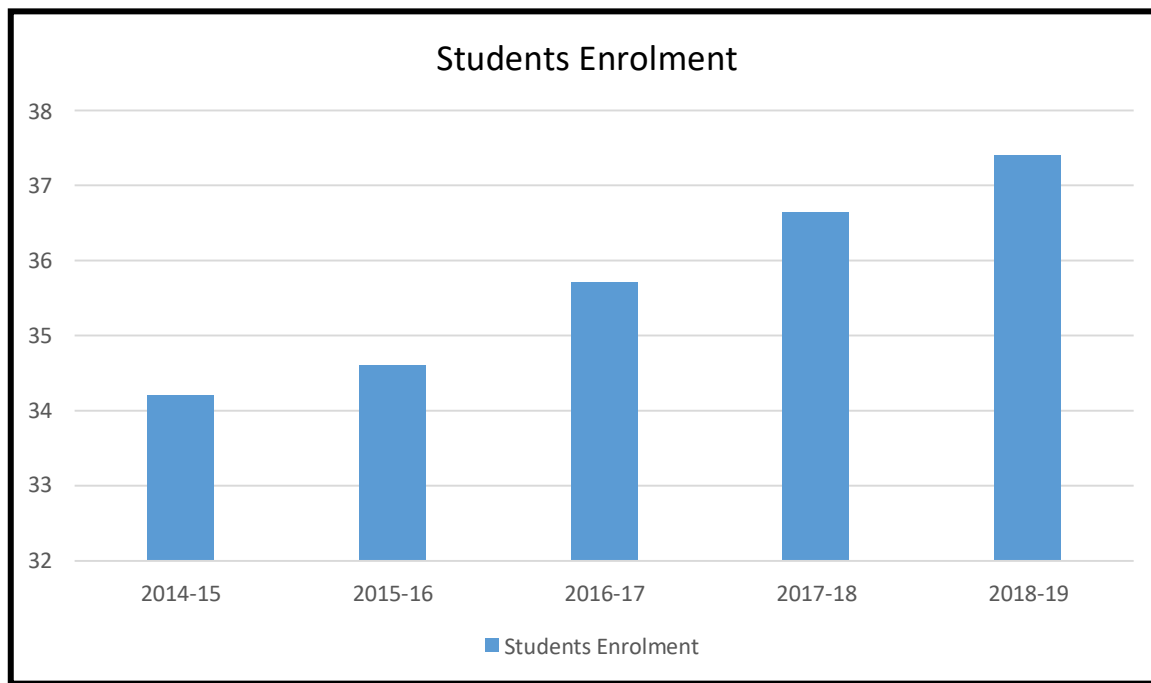

Figure 4: Students Enrolment (In Millions) (Source: AISHE 2018-19)

- **Distance and Open Learning**: Distance courses and open learning is one of the important characteristic of Indian higher education system and is looked upon by 'Distance Educational Council of India'. Distance enrolment constitutes about 10.62% of the total enrolment in higher education, of which 44.15% are female students.
- **Policy framework**: Policy framework is carefully planned at the level of Planning Commission, Ministry of Human Resource Development (MHRD) and University Grants Commission (UGC) which leads to centralization of policy making process and these policies are implemented for proper management of the institutes of higher education in India.
- **University Rankings**: It is used to measure, compare and assess institutional quality based on numerous indicators related to reputation, research, teaching, academic rigour and various other factors that assist in fulfillment of academic, infrastructural and developmental needs of students. Indian educational institutions flounder in comparison to major universities around the world with substantial ranking agencies describing India's show of educational development as poor across major parameters
- **Scholarship Programmes**: There are various scholarships provided by the central and state government in India. Some of the scholarships provided by the central government are as follows:

(a) Central Sector Scheme of Scholarship for College and University Students.
(b) Top Class Education Scheme (for person with disabilities)
(c) Prime Minister's Scholarship Scheme

Through these scholarship programmes, both central and state governments aim to provide financial assistance to the students belonging to low-income group.

- **Subsidization of Education:** Education in India is subsidized through government aids. India spends an estimated 4% of its annual GDP towards the educational system. This creates a contrast to other education systems around the globe where there is limited state funding towards the betterment of system.
- **Accreditation**: As per the data provided by the NAAC (National Accreditation and Assessment Council) as of June 20, not even 25% of the total higher education institutes in India were accredited. Out of those ranked, only 30% of universities and 45% of colleges were found to be ranked at A Level.

4.3.3   Challenges Faced By Indian Education System:

- **Quality of Education:** The quality of education imparted in Indian classrooms is still not at par with international standards. There are gaps between industry expectations and what students are being taught in the classrooms. Though there is growth in the levels of Indian faculty available for imparting education, there is no consideration whether the quality matches the desired output .
- **Accountability:** The system of accountability in India for education is highly disproportionate. There is minimal accountability for the flaws that persist and takes higher than usual time to plug the leakages or drawbacks.
- **Inclusiveness:** In India, not only the availability of educational services, but also the availability of inclusive infrastructure in educational institutions is scarce. India is a country with around 22 million people who suffer from a disability. This forms around 2.1% of the total population of the country. The availability of education for disabled children is a major concern. Students with disabilities have a lower rate of enrolment into schools and a higher probability of dropping out of school. With the social stigma around disability, enrolment for primary education is very low. Consequently, enrolment for undergraduate education is poor.
- **Quality & Quantity of Research:** Research remains a highly valued factor of measuring the quality of education. The number of publications from India has increased steadily but it still lags behind the likes of developed nations such as Canada.
- **Lack of Funding Alternatives:** The only significant inflow of funds for public institutions is government grants & aids. Insufficient funding has been identified as the top concern among institutions of learning. A need for alternative sources of funds is necessary to be established in order for institutions to improve their academic & infrastructural facilities.
- **Higher Pupil Teacher Ratio:** The Pupil Teacher Ratio for India stands at 29 as per the All India Survey on Higher Education 2018-19. However, when compared to other nations it is of magnanimous proportions such as Canada where it stands at 9.

PTR for Regular Enrolment		
Year	University & Colleges	University & its Constituent Units
2014-15	22	15
2015-16	21	16
2016-17	25	19
2017-18	30	20
2018-19	29	18

Table 7: Pupil Teacher Ratio In India (Source: AISHE 2018-19)

4.3.4   Policy Responses & Reforms

The government of India has introduced various policies over the years in order to promote education and skill development. Here are some of the integral policies related to education that was introduced recently.

1) **Compulsory Gender Education**: The government of Telangana made gender education compulsory at graduation level. It became the first Indian state to do so and has also introduced a bilingual textbook.

2) **Yoga Education:** Directed by the Council for the Indian School Certificate Examinations (CISCE), all ICSE and ISC schools will now have compulsory yoga classes.

3) **New Education policy for Girls**: The government is planning to put in place a "modern education policy". The focus of the new education policy (NEP) will be on girls' education. It's planning to eradicate the inequality in education.

4) **Diksha Scheme:** The government of India will soon launch the learning portal 'DIKSHA' to upgrade the teaching skills and will initiate the integrated B.Ed programme.

5) **Sports Education**: The government of India is planning to make sports education a part of the Fundamental Rights and to promote it nationally.

CHAPTER 5:
ANALYSIS AND INTERPRETATION OF DATA

5.1. Analytical Interpretation of Responses To Questionnaire

5.1.1 Introduction

The team has conducted primary research in order to get an in depth view of the prevailing situation in both the countries. The findings yielded from our primary research show a distinction in the overall situation in Canada and India. All these distinctions can be narrowed down to three major factors that show stark contradiction. These three factors are analysed in depth in this chapter.

5.1.1 Analysis of Data

I. Teaching Methodologies:

61.5% of student respondents from India stated that the teaching method used is more teacher-centric whereas 78.9% student respondents from Canada stated that the teaching method used is student- centered.

It was observed Indian teachers focused more on traditional teaching techniques whereas Canadian teachers make more use of innovative teaching pedagogies. Indian students adopt rote learning to succeed in marks based approach of examination. Hence, 76.4% of Indian students opined of conceptual learning for better performance.
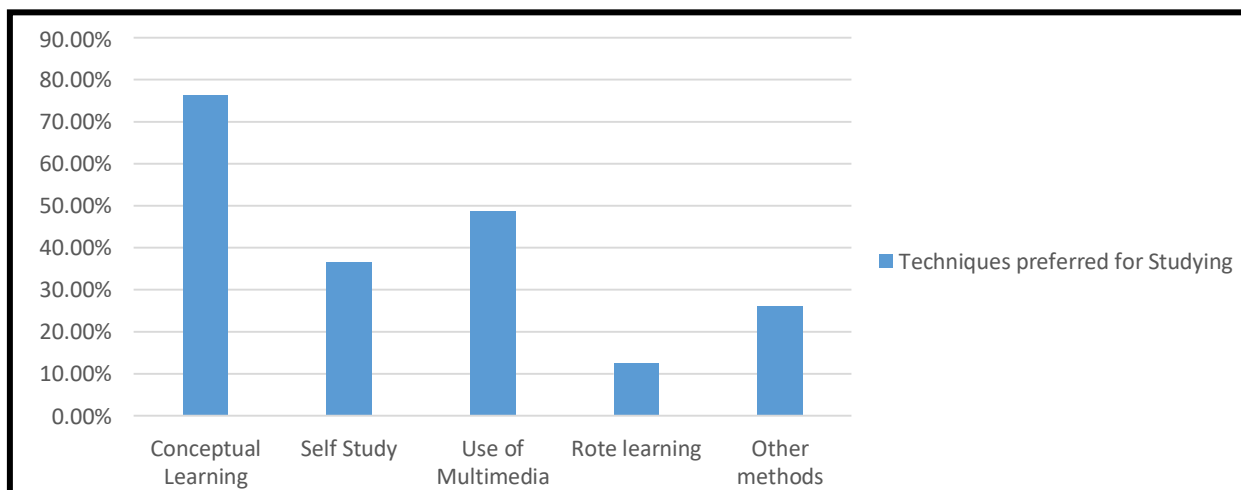

Figure 5: General Preference of Techniques for Students (Source: Primary Data Source)

Respondents in Canada are of the opinion that the teaching methods are much interactive because they are personalized, use of inquiry based learning and are student friendly due to inclusion of games and other activities in teaching .Students are of the opinion that the teachers indeed use student focused techniques and their system gives relevance to individual culture, language and student capability.

Majority of the Canadian teachers place value on individualistic growth by encouraging independent thinking and emphasising on research based education. Teachers experienced that virtual classrooms helps students to grasp and revise the study material at their convenience and approach teachers online as well as offline.

Indian Teachers mentioned that they wish to teach students using interactive methods but there is either lack or improper functioning infrastructure - like mics, projectors, laptops and internet facilities which results in wastage of lecture time. Sometimes students also are not co-operative and show resistance to such techniques due to lack of seriousness and value for degree.

One of the major issue faced by Indian teacher is high student-teacher ratio (1:120) where as in Canada there is a lower student-teacher ratio (1:40). This acts as a major hindrance for adopting modern teaching-learning methods.

II.   Availability of Courses:

Around 90% of Indian students were influenced to choose the degree they are pursuing because of lack of variety of courses, dominance of conservative attitudes and peer pressure regarding career choices. This leads to a loss of interest in academics. Further this has a significant impact on employment since 88% of placement agencies state that Indian students lack employable skills.

On the contrary, 83.4% of Canadian students on the other hand say that the motivating factor for them is their interest and passion towards the course that they are pursuing. While finance does act as a barrier for undertaking certain courses, student loans and public colleges provide a helping hand. Easy availability of student loans in public colleges provide a solution to the financial problems faced by students. Further, students have a wider variety of courses to choose from.
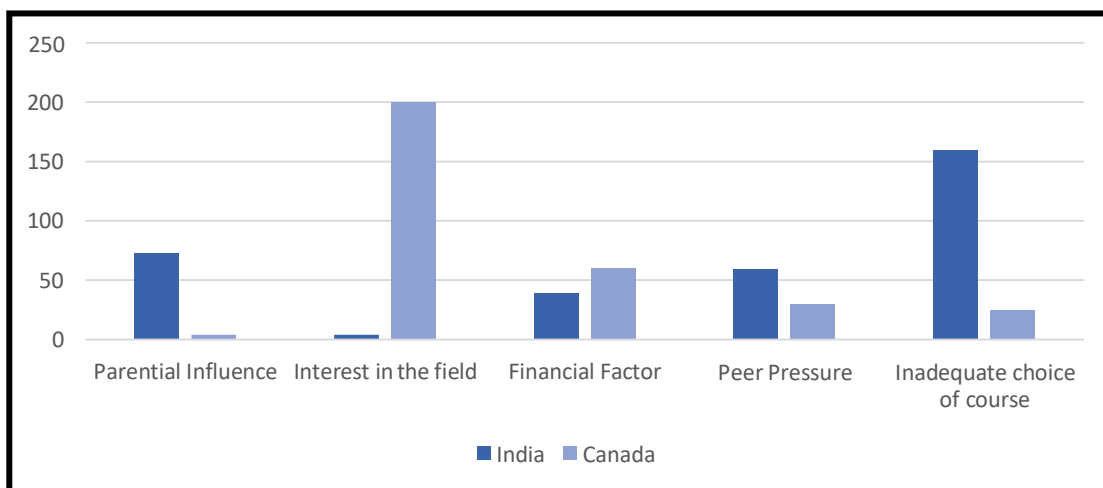

Figure 6: Reason for Choice of Degree (Source: Primary Data Source)

III.   Disparity in choices for Differently Abled Students:

As stated earlier that, choices offered to Indian students are insufficient and at the same time the situation for those students who lie on the spectrum of being differently abled is much worse. They are forced to pursue that degree which Institutes find suitable for them as against that degree which they want to

pursue. 89% of respondents in this category answered that when it came to deciding the course for under graduation, they simply took that course in which the Institute readily admitted them. The limited choice gets further reduced for differently abled students and they are left with close to no choice.

On an average, 35.2% of Indian students admitted that there are facilities for students with special requirements. 48% of the physically handicapped students admitted that they have adequate facilities like ramps and specialized washrooms for those who have physical impairments. However, resources such as teaching using Braille system for visually disabled or teaching using sign language for deaf learners are sparsely available. Hardly any colleges have specifically trained teachers for those with Cognitive or Learning disabilities like dyslexia. However, approximately 10% respondents acknowledged having facilities for students with invisible disability or psychological disorders like Autism, Obsessive Compulsive Disorder, Attention Deficit Hyperactivity Disorder etc. Even the teachers are not sensitized and many a times not aware about the needs of special children.
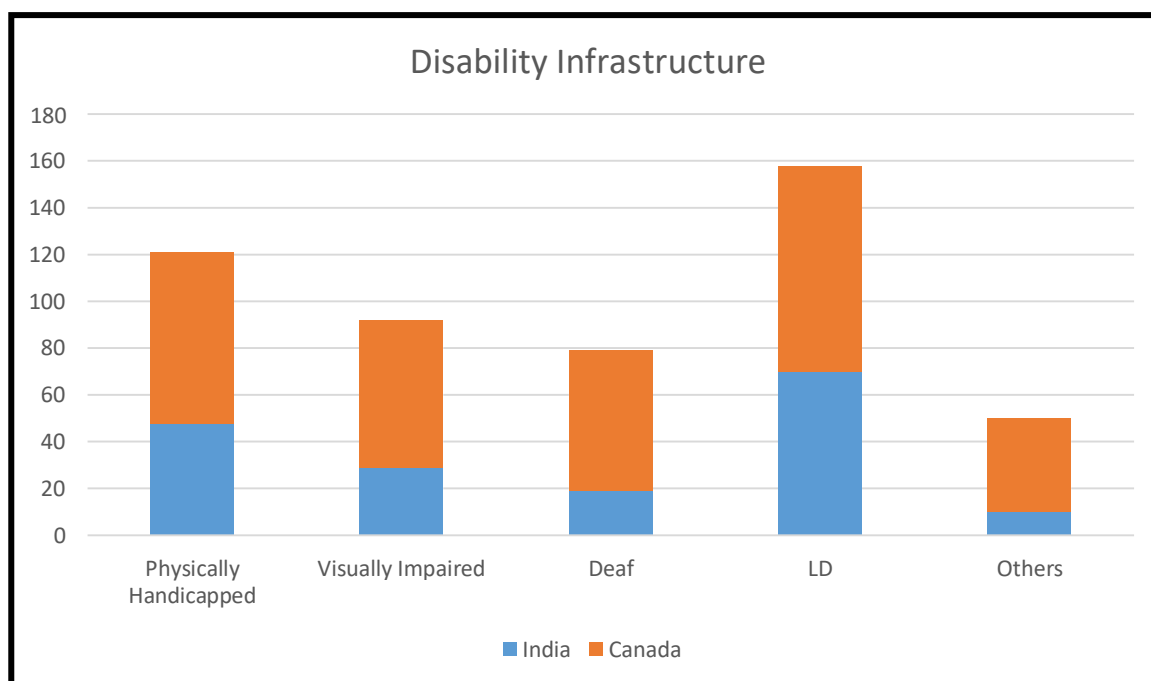

Figure 7: Graph showing Disability Friendly Infrastructure Available For Special Children

On an average, 64.8% of Canadian students admitted that there are facilities for students with special requirements. Students seemed to be satisfied with what they were pursuing and those who were dissatisfied did not blame lack of choice for their dissatisfaction. They felt that most of the Institutions were either adaptive for disabled students or were at least trying to cater to their needs.

The teachers from almost all universities felt that their Institutions were capable to handle students with any kind of disability, and said they constantly try to update themselves with the ability of fulfilling the needs of such students. The National Education Association of Disabled students in Canada constantly provides the required guidance to the students so as to impart inclusive education.

5.2   Parenthetical Citations of Personal Interviews

5.2.1   Introduction

In order to gain better insights into the system of education in the Indian sub-continent along with a panoramic view of the ground level realities, the team undertook interviews with personnel who have been a part of India's educational scenario. Our interviews consisted of a well-designed questionnaire which aimed at learning the respondent's point of view through a structured formulation of inquiries. The responses so received were then compared on an overall basis for common parameters.

The findings were established after an in-depth discussion with the interviewee on an individual basis on various aspects of the Indian system of education. These parameters were further inculcated into an opinion matrix which establishes the observable characteristics between Canadian and Indian way of education. The interviewees were selected on a very careful basis and amongst individuals who demonstrated an understanding of the Indian education.

5.2.2 Analysis of Data

1. Syllabus:

Currently the syllabus is being designed centrally which is applicable to all the institutions affiliated to that University. When the university is planning the portion it has to keep in mind its reach and the area when the portion is being taught. The problems in a particular area, the overall situation and scenario also contribute to the process of syllabus determination. Syllabus updation takes place frequently but its implementation gets delayed. The **new education policy** in India stresses on the importance of designing and crafting syllabus in a manner which is student friendly/centric. However, the sad reality is that, we still aren't implementing the policies which are aimed at reforming the education system in India. More subject choices should be given to students to attract their attention. Restricting the subjects based on streams hampers with students creativity and drive. The combination of subjects offered also needs to be improved.

2. Faculty:

Most of the teachers wish to inculcate interactive teaching methods but time constraint, huge class strength, inappropriate infrastructure and lack of student participation act as barriers. They have to cover ample of portion in limited time hence limited scope exists for practical teaching. Also, students show hesitation to give extra time to teachers for such practical training. The teachers are willing to register themselves in the Teacher Training/ Development programme or additional courses but they are not willing to bear the cost of such programs. They want such programmes or courses to be sponsored by the institutions in which they work, but institutions do not have such grants. Free Programmes organised by government do not attract interest of the teachers as they feel that they are already aware of the matter. Mandatory teaching programmes have the same effect as free programmes.

3. Examinations:

When testing students, question papers are set in a student friendly manner. Interest of both average and intelligent students are kept in mind. The focus of the exam is not to 'know what a student does not know, it is rather to gauge what a student knows'. Whenever internals are conducted the student will be evaluated from the guidelines provided by the university. Entrance exams in colleges follow quantitative aptitude

rather than more holistic personality intake. Exams are just marks-based rather than skill building.

4. Infrastructure:

The incumbent institutions in India show a fair amount of inclusiveness of students belonging from various socio-economic backgrounds as well as with those having various disabilities (physical & mental). In fact the UGC has given a mandate, to be followed by the various institutions in showing inclusiveness while providing admissions. Many aided institutions show such inclusiveness but still there is a scope to broaden the extent. The physical disabilities is are taken care of well but however quality education to other special students in terms of alternative methods of teaching, learning and evaluation is gearing up very slowly. The **grants and infrastructure** for disabled people are **very insufficient to cater their needs**. The vastness of the nation and ignorance makes it very difficult to reach towards those who need it, in adequacy**.**

5. Autonomy & Centralization:

Currently all the colleges are trying to improve the quality of education that they are imparting. They wish to have best graduate students when compared to other colleges. This is one of the reason colleges prefer to be autonomous. When a college becomes autonomous it can set a separate syllabus based on the level of students enrolled. Also it can focus more on overall education instead of just book based learning. Different geographical locations have different requirements where the student body has different needs and dissimilar capacities which creates the importance of **decentralization and autonomy**. These two factors proves to be successful in catering the needs of students. Taking this into consideration, this is where the Importance of **decentralisation & autonomy** come in. When these two factors are in place the implementation of any Institution's idea become a success and thus they prove to be successful in catering to the needs of various students.

6. Employability**:**

The Indian education system is oriented towards **employment and employability**. The focus is mostly **on "getting a job",** which creates a **lack of interest t**owards quality education. The Indian undergraduate education system is not perceived as undervalued, however the **attitude towards it is very myopic**. The approach towards education and teaching-learning methods is very **teacher centric**, with limited focus on the needs of the students.

7. Vocational Training:

The **vocational skills** in the current scenario aren't being addressed well. Attempts are being made in some pockets of the country to bring in such skills, however it lacks a formal structure. Due to absence of homogeneous application of universal set of guidelines by Indian institutions, the skills development and vocational training, knowledge, leadership, and emotional intelligence **do not bridge the gap between industry requirements and academic scenario**. The focus of education is very **subject centric and not knowledge oriented**, which makes it very difficult to impart these skills properly. There is a lack of awareness among the students regarding the availability and importance of such skills in industry. A general consensus among the interviewees was all the vocational skills should be integrated with the current education system in the form of **core subjects, electives and value added subjects**.

6.3 Matrix Representation of Parameters

The matrix below lists out the similarities and dissimilarities of each system of education and represents them side-by-side with the other system of education. This makes an analysis of the said parameters and their individual characteristics easier by providing a comprehensive insight.

	Indian System of Education	Canadian System of Education
Syllabus	• Centrally Designed • Rigid Implementation • Stream-wise Stratification	• Independently Designed • Flexible Implementation • Student Centric Approach
Faculty	• Higher Student – Teacher Ratio • Lack of Infrastructural Facilities required for quality teaching • Lack of Flexibility	• Lower Student – Teacher Ratio • Adequate Infrastructural Facilities • Flexibility for Faculty
Examinations	• Marks Based Approach (Quantitative) • Memory Oriented • Strict Guidelines • Restrictive Pattern	• Case Study Based (Qualitative) • Knowledge Oriented • Flexible Approach • Inclusive Pattern
Infrastructure	• Limited Inclusivity • Redundancy in Support Systems • Funding Availability • Lack of Infrastructure for Research	• Inclusive • Technological Support • Funding Availability • Prime Focus
Autonomy & Centralization	• Hierarchical Structure • Limited Autonomy • Centralised Structure	• No Formalised Structure • Higher Autonomy • Decentralised
Employability	• 'Getting the Job' Attitude • Employment Focused Choices • Orthodox Focus on Employment	• Interest Focused • Panoramic View of Choices • Development Focused
Vocational Training	• Under Developed • Excluded from Curriculum • Not skill-based	• Knowledge Oriented • Holistic Approach • Industry Centric
Students	• Limited Participation • Unaware About Career Choices	• Higher Participation • Aware About Career Availability

CHAPTER 6:
THE WAY AHEAD FOR EDUCATION IN INDIA:

6.0 Overview

The analysis of data gathered about both the distinct higher educational systems crystallizes the observable differences and form changes that are required at all the three stages of the Indian Education System, that is, Central Governance (UGC), universities, and the affiliated colleges. Along with this, the team has also suggested implementation of a model.

6.1.   Recommendations:

6.1.1   Policy Makers:

- **Increase in the number of Vocational courses:** The vocational courses should be specifically developed for easy inclusion in the curriculum, so that the void to enhance student's skills in non- academic areas gets filled. The team believes that there is a need for them to introduce a more diverse and varied range of courses thereby offering a plethora of options to students.
- **Market-oriented courses:** Courses available to the students should be updated in accordance with the requirements of the market. The market and its requirements should be studied extensively before deciding the content that is to be taught under a particular course in the colleges. The future potential needs to be recognized by them and they should design courses that produce professionals to meet the needs of tomorrow.
- **Consideration towards current trends:** The syllabus needs to be revised continually, so that the matter incorporated is in line with the on-going trends in the profession that the students wish to practice after completion of their degree. This kind of a distinct identification will ensure that students are not learning primitive concepts.
- **Practical training:** Internships and practical training should be made an integral part of the curriculum. When the students work in the industry, they will understand the technicalities of the vocation. They will be in a better position to take decisions regarding their career. Also, it will help the students to be mentally prepared before they start working. Hence, career shocks can be avoided. In addition to the advantages available to students, even companies can save funds that they usually spend on fresh employee training.
- **Introduction of a specialized wing to offer streamlined undergraduate education for disabled:** Throughout the course of research, the team sensed a broad gap between the education available for general students and students with special needs. To bridge this gap, the team recommends that specialized wings of educational sections be set up across the country that would fulfil all the parameters that guarantee a seamless education experience to disabled students. These wings will have their sole focus on curation and implementation of educational policies for the differently abled.
- **Inauguration of statewide academic competition between specialized sections of colleges:** In order to induce higher investment for the purpose of developing specialized infrastructure, competitions that would create an optimum foundation for differently abled students need to be introduced and promoted. The idea of achieving excellence and increased reputation would prove to be an effective tool to guarantee that facilities provided by institutions do not just meet the bare minimum requirements, but also extend to the specific and primary needs of students.
- **Virtual Learning Platforms:** For teachers to be able to share new developments and additional details

with the students as and when required, virtual learning platforms need to be made available to the students. With the help of this platform, they can maintain communication with students beyond the classroom and consequently, extend the process of learning. This will give the teachers the convenience of teaching the students from the comfort of their home by using means like video conferencing and satellite lectures.

6.1.2   Institutional Heads:

- **Customization of Courses:** The Institutes need to allow the students an opportunity to personalize or modify courses as per preference by combining subjects of their choice to induce maximum dedication and motivation of the students in the degree they are currently pursuing. This will allow them to pursue subjects that they have an avid interest in without compromising their future prospects and thereby broadening their prospective and overall knowledge reach.

- **Awareness Creation:** The students will be able to make a well informed decision regarding the path of their career, if they are made aware about the available job opportunities in their field of choice. While there are institutes that do this, it is observed that their scope of awareness is limited to only to those courses that are provided by them. All institutes should strive to give their students as much information as possible regarding all the available options.

- **Better Implementation of Credit System:** A credit system would provide for a more flexible and liberal environment, thereby assisting students to make appropriate decisions about their study schedule and helping them develop a responsible conscience towards their course.

- **Regular Maintenance and Updating of technological Infrastructure:** For teachers to make use of the available infrastructure, facilities provided should function properly. A monthly exercise should be carried out by the institute's authorities to check the functioning of such infrastructure. The teachers should be trained and educated about the ways to use this infrastructure or a technician should always be available on campus.

- **Interactive skills training:** The colleges need to organize attractive courses that are aimed at personality development. These kind of courses are necessary to groom the overall personality of students. This development of students is necessary for them to fare well when competing across the globe.

- **Training workshops**: Teachers should be provided financial support, either by their institutes or by the government, to pursue reputed courses related to the subjects that they are teaching. They can remain up to date with the recent developments and impart better knowledge to their students.

- **Disabled centric modifications:** With a view to have better and fulfilling facilities for disabled students, the following points can be brought to practice:

(a) Extensive courses and tests in Braille that are designed and conducted exclusively for blind students. An alternative is to invest in computers designed specifically for the visually impaired;

(b) Assigning well trained and informed teachers so that students with psychological disorders will be able to study in a better, safer, and more efficient manner;

(c) Facilities made specifically for the disabled categories must be maintained, developed and updated just as frequently as the facilities for regular students are;

(d) Equal importance should be given to every category of disability;

(e) Inclusion of courses for the mentally challenged in order to boost their academic and employability;

(f) There should be no discrimination in the number and quality of courses offered;

- **Use of Disabled friendly infrastructure in institutes as a tool for employment:** Institutes that have

dedicated infrastructure for disabled can provide their students employment and become part time offices in the after-hours of colleges, since most colleges in India are not operational throughout the day. Companies can outsource certain tasks to these students and it can also form a part of their CSR activity.

6.1.3 Academicians:

● **Inculcating Sensitivity Regarding Disability:** Along with training to teachers for meeting the needs of students with disabilities, other students also be sensitized about the conditions of such students. They should also be trained with basic skills to help these special students.

● **Interconnectivity between Teachers and Parents**: A compulsory platform should be made available to the teachers in order for them to keep in contact with the parents/guardians of their students. With the help of this platform, they can communicate their observations and concerns to the parents. Additionally, a student's assignment can be informed to the parents and they can in turn help their children. An open and trusting relationship with parents will ensure overall development of students.

● **Use of Interactive Teaching Pedagogy:** Teachers need to make use of techniques that induce interest, curiosity and innovation among students. They can make use of group projects, game- based learning, and research-focused education. These techniques will make students self-sufficient learners and assist them in grasping new concepts, even after the completion of their courses.

● **Mentorship and Counselling:** As competition is on the rise and so is the pressure on students, we believe that teachers should put in extra efforts to bond with the students and act as mentors. They can act as counsellors for the students, so that the students feel free to share their problems and access a safe learning environment.

6.2   *Establishment of Suggested Model*

Currently the entire funding of the colleges in India is dependent on the grants given by the University Grants Commission i.e. UGC along with the donations that they receive. This limitations at times lead to shortage of funds for developmental projects that the colleges want to carry out.

We collectively suggest the following model to solve the existing problems:
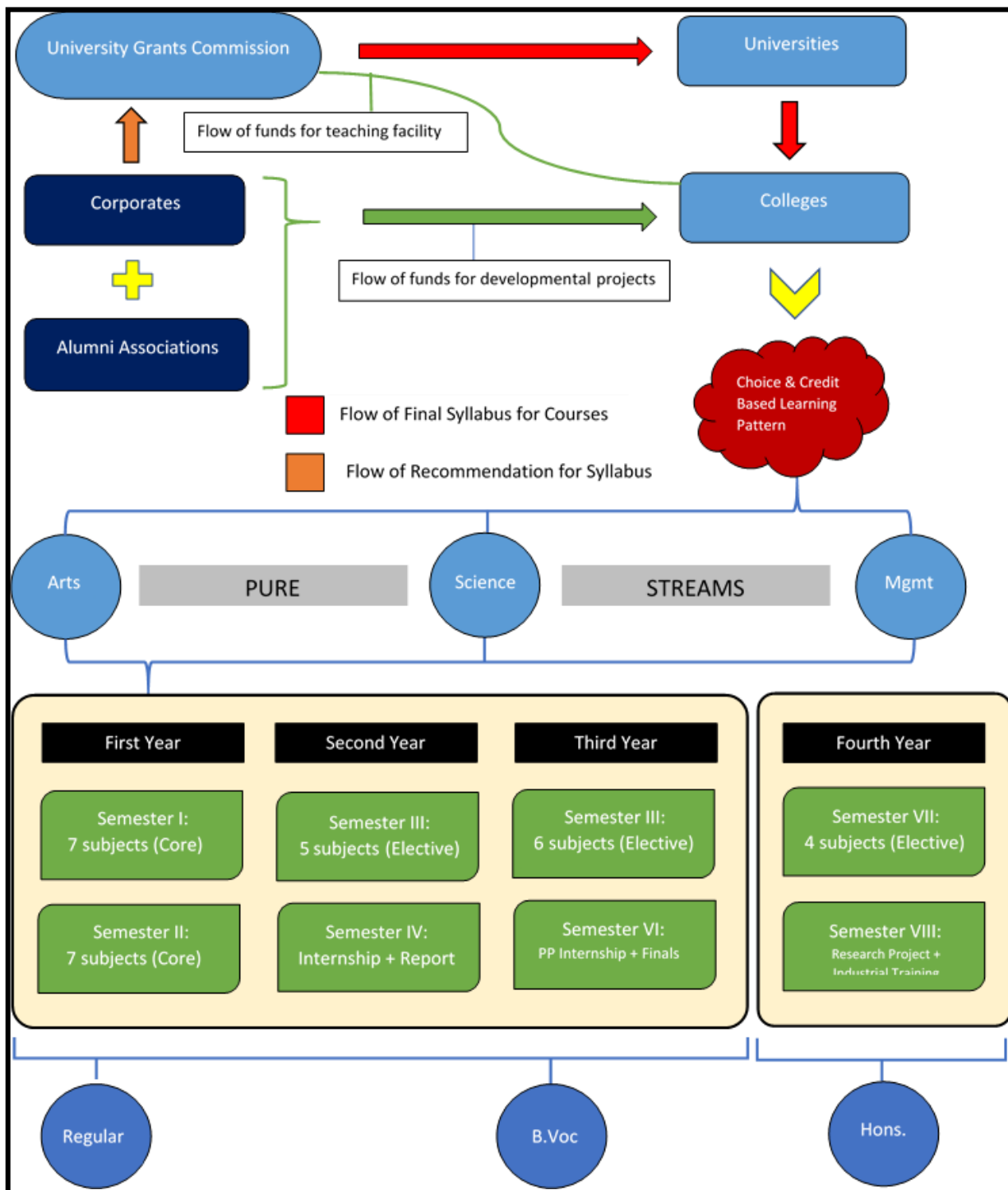
Figure 8: Working Mechanism of the Suggested Model

6.2.1   *Explanation of the Suggested Model & Its Mechanism:*

The model has been developed after an in-depth and thorough analysis of the problems that plague the Indian education system. The data collected through our primary sources along with secondary means of information have brought up observable & significant shortcomings that have been kept in mind while developing a model that can integrate in the unique Indian education system without altering major structural beams. The drawbacks were narrowed down into three major branches as follows:

- Deficiency in Requisite Funding
- Lack of Qualitative Education Facilities & Methods
- Observable 'Gap' Between Academic Structure & Industrial Expectations

The model brings about certain measures through a two-step approach to the present system. The model can be divided into two aspects as per their focus on solving the mentioned drawbacks.

I. Funding & Determination Aspect
II. Courses & Pattern Aspect

Funding & Determination Aspect: India spends equivalent to 4% of its annual GDP towards the existing educational system. The heavy subsidization of education in India has undeniably led to heavy burdens on the exchequer of the nation. Our model suggests that this amount is bifurcated on the joint shoulders of the national exchequer, corporations and alumni associations. The salient features of such an arrangement are listed out below:

- While the national budget for spending on education can remain on track, there can be additional investments through the route of mandatory spending for corporations. While such a mechanism already exists in the form of Corporate Social Responsibility for corporate force in India, there are no significant gains on this front since most corporations deviate towards other objectives which are in sync with their own company's objectives.
- The suggested model theorizes of a mandatory spending limit to be fulfilled by corporations in the form of monetary funds along with a system of adoption of colleges by corporations which can incubate growth & optimum utilization of the funds which are made available.
- Alumni associations can play a major role wherein they act as not just the benefactors towards their respective college but as watchdogs who ensure that colleges do not deviate from their set objectives and fulfilment of enhanced education.
- The model also provides ways to bridge the gap between the education imparted in classrooms and the requirements of the corporate world at large through a systematic determination of syllabus determination involving flow of recommendations from various stakeholders to the University Grants Commission. Further determination of syllabus flows in the same manner as per in the existing system.
- Benefits could be derived from this arrangement in the form of increased productivity of college personnel, better availability of interactive teaching methods, better student facilities, improved research & development opportunities, etc.

Courses & Pattern Aspect: The model brings out an improved & modified system of choice & credit-based learning system. This system provides lateral & vertical mobility to students along with an improved choice system. The system provides a mix of theoretical learning & practical understanding which bridges the gap between academic scenarios & industrial expectations. The system also takes into account the needs of differently-abled candidates and promotes inclusivity.

- The pattern involves the design of undergraduate programs in India as three-year credit-based structures. Each year displays distinct features with regards to catering to student needs & facilitates narrowing the bridges of observable gaps between dysfunctional educational aspects.

- The first year of undergraduate program in any pure stream will consist of mandatory core subjects which are established through recommendations and discussions as well as well-rounded syllabus framing procedures. It intends to develop the students' core competencies while developing a well- meaning & educated individual.

- The second year consists partly of classroom teaching methodology and an insightful experience in the form of practical training. The period of practical training will help students to test out their mettle and develop exposure to their interested area of learning through **corporations, colleges & NGOs.**

- The student will be expected to submit a Project Report describing the exposure and learnings gained and the skills which the student believes he has acquired in the course of his training. Such a report may count towards the final grading approach by the institution. The subjects forming the second year of study will comprise of a mix of mandatory ability enhancement courses and electives based on the students' choice of specialised knowledge field.

- The first part of the third year consists of choice-based electives which provide in-depth understanding of the field of specialization. Along with such developed learning of their field, the student will be expected to undertake a mandatory outstation internship in order to develop additional working & specialised knowledge of their field of study.

There is an added aspect of distribution of programs on the criterion of intensiveness & composition of course structure. There are three bifurcations of degree programs namely: Regular, Honours and B.Voc. The Honours section would include the addition of a fourth year of study wherein a set of specialization can be developed through a focused study and selection of subjects. It must be noted that students still maintain their choice of selection of specialization. The vocational aspect (B.Voc) is specially designed for differently abled students who will be granted subjects on the basis of their need and understanding levels. This would inclusivity while maintaining quality of education through an offer of need-based development of subjects. The program of B.Voc will also cater to the needs of students who intend to pursue multidisciplinary education.

Years of Courses	Types of Courses	Honours	Regular	Vocational
First Year	Sem-I	7 Mandatory		
	Sem-II	7 Mandatory		
Second Year	Sem-III	2 (M) + 5 (E)		3 (T) + 4 (P)
	Sem-IV	Unpaid Internship		
Third Year	Sem-V	6 Elective		
	Sem-VI	Paid Internship		
Fourth/Additional Year	Sem-VII	4 Electives		
	Sem-VIII	Research Project	NA	

Table 8: Structure of the Model

6.2.2   Features of the Suggested Model:

1. **Exclusive Funding For Development By Corporates:** The model would assist all the developmental projects of colleges by funds acquired from Corporates. Each company will adopt 4-5 colleges and bear the monetary of costs for betterment of infrastructure, providing scholarships and other funding requirements excluding the salaries payments of teachers. The advantage to Corporates under this model is the tax benefit provided by government. They will also be allowed to categorize this expenditure under their Corporate Social Responsibility Requirements. They will also have to mandatorily spend a portion on Research & Development projects which will act as another tool for availing tax benefits.

2. **Students and Industry Requirement Induced Syllabus Curation:** The model would be implemented sector wise for testing the efficiency then it can be implemented on a national level. Initially the system would be run in western zone given that it is considered to an education hub in India. The syllabus in this model would continue to be designed by the UGC along with the Universities that are functional at the state level but the recommendations for the content of the syllabus would flow from Companies funding the colleges and the Students studying in these colleges.

3. **Inclusive Progression:** While the companies will be required to invest certain amount in the institutions, the intuitions would spend a specific part of these funding's on improvising and enhancing the facilities for differently abled students. Spending's each year would ensure that both top class and up to date facilities are made available or the facilities that are provided would expand each year. Eventually each colleges would have provisions for other than regular students.

4. **Utilization of UGC Grants Towards Teaching Quality Enrichment:** The grants currently spent on infrastructure and allied projects by the UGC would be utilized for extensive training of the teaching facility. They will conduct and/or sponsor advancement courses to the professors. This will guarantee every teacher's knowledge and skill development. In turn the students would be the recipients of better quality of education.

5. **Constant Amplification in the Investment in the Education Sector:** With India being a developing economy, the growth is going to remain constant at least till the end of next two decades. This growth points towards increase in the number of Industries and also an increase in the overall earnings of the existing industries. With the model the investments in the education sector would be directly proportional to the increase in the earnings of the industries. This will be helpful to take away the burden on government funds while ensuring productive usage of excess funds

6.2.3   Limitation of the Suggested Model:

While the aspect of funding and determination can be applicable on a broad basis, the course & pattern aspect has been developed keeping in consideration pure streams viz. B.Sc, B.Com and B.A. The said aspect cannot be suitably applicable for professional streams and streams requiring special consideration like Fine Arts, Liberal Arts, etc.

CHAPTER 7:
CONCLUSION

Skilled labour has become the most important capital resource with the added population and strive for quality around the globe. In order to optimize and develop this potential resource, the best tool to be used is higher education.

The study focuses on two countries – India and Canada, to understand the education system currently in function across the economy. The team has given specific focus on understanding the viewpoints of students, teachers and placement officials. This has resulted in a comprehensive understanding of the strengths and problems faced in the Indian and Canadian education systems. It further enabled us to develop reforms to strengthen the Indian higher Educational system and improvising its role in Human capital development.

Through effective and efficient analysis the team concludes that significant differences do exist in the structures prevailing across the two countries in question, right from the way the system operates to the perception of education.

The suggestions and recommendations provided by the team aim at betterment of the positions of Policy makers, Institutional heads and academicians. The reformative model provided explains how injection of funds from the corporate sector and alumni associations to the educational sector and updating of the currently available degree course structures will add to the efficiency, ease, and added employability of the system output.

The Indian undergraduate educational system should try to emulate these suggestions and draw inspiration from features observed in the Canadian undergraduate education system. Not only would this help the system to become more student friendly but it will also enable our economy to utilize the human capital to function at a higher quality level. This would catapult Indian education out of the outdated educational techniques and grow in line with the global educational facilities, enabling it fully to utilize the human capital available as a tool for unparalleled and advanced development.

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